

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human LIF R α in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 32953
Purification	Protein A or G purified from ascites
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human LIF R α Gln45-Ser833 Accession # P42702
Conjugate	Alexa Fluor 350 Excitation Wavelength: 346 nm Emission Wavelength: 442 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 μ g/10 ⁶ cells	HeLa human cervical epithelial carcinoma cell line

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

The activities of the pleiotropic cytokine LIF are mediated through a high-affinity heterodimeric receptor complex consisting of two membrane glycoproteins: an α subunit (LIF R α , also known as LIF R and CD118) that binds LIF with low affinity and the 130 kDa (gp130) subunit that does not bind LIF by itself, but is required for high-affinity binding of LIF by the complex. The gp130 subunit was first described as the signal transducing subunit of the high-affinity IL-6 receptor complex. Besides LIF, the high-affinity heterodimeric LIF receptor complex has been shown to mediate the activities of oncostatin M (OSM), cardiotrophin-1 and ciliary neurotrophic factor (CNTF).

Human LIF R α cDNA encodes a 1097 amino acid (aa) residue precursor type I membrane protein with a 44 aa residue signal peptide, a 789 aa residue extracellular domain, a 26 aa residue transmembrane domain, and a 238 aa residue cytoplasmic domain. LIF R α is a member of the cytokine receptor family and has extensive homology to gp130. The extracellular domain of LIF R α has two cytokine receptor domains and three fibronectin type III repeats. In mouse, mRNAs encoding a soluble LIF R α and lacking transmembrane and intracellular domains, have been isolated. Soluble LIF R α has been shown to bind LIF and has LIF antagonistic activity.

References:

1. Bazan, J.F. 1990, Proc. Natl. Acad. Sci. USA **87**:6934.
2. Gearing, D.P. (1994) *Guidebook to Cytokines and Their Receptors*, Academic Press, p130.
3. Pennica D. *et al.* (1995) J. Biol. Chem. **270**:10915.

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